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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,748	08/21/2003	James I. Livingstone	A894629US	7635
37047	7590	06/02/2004	EXAMINER	
GOWLING LAFLEUR HENDERSON LLP SUITE 1400, 700 2ND ST. SW CALGARY, AB T2P 4V5 CANADA			COLLINS, GIOVANNA M	
			ART UNIT	PAPER NUMBER
			3672	

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,748

Applicant(s)

LIVINGSTONE, JAMES

Examiner

Giovanna M. Collins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show the shroud (in Figs 2a and 3a) in relatively air tight and frictional engagement with the inner wellbore wall as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 108 and 205. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to because Fig. 3b does not show how the compressed air (36) gets through the piston (24) to get to the venturi (34) in the inner pipe (6). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the rotary able or top drive must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1-13,16-35, and 38-43 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18,21-24,27-40,43-47, 56-58 of copending Application No. 10/644749. Although the conflicting claims are not identical, they are not patentably distinct from each other because the application limitations although broader are obviously met by the copending Application No. 10/644749.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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2. Claims 1-7, 20,23-25,27,28,32 rejected under 35 U.S.C. 102(2) as being anticipated by Smet ('223).

Smet discloses (see Fig. 3) a method of drilling a directional or horizontal wellbore comprising the steps providing a concentric drill string having an inner pipe, (6) said inner pipe having an inside wall and an outside wall and is within an outer pipe (5) having an inside wall and an outside wall, said outside wall of said inner pipe and said inside wall of said outer pipe defining an annulus (at 32) between the pipes; connecting a bottom hole assembly comprising a directional drilling means to the drill string (see col. 5, lines 51-58); and delivering drilling medium through one of said annulus or inner pipe for operating the directional drilling means to form said directional or horizontal wellbore and removing exhaust drilling medium by extracting exhaust drilling medium through said other of said annulus or inner pipe.

Referring to claim 2, Smet discloses a method of drilling a directional or horizontal wellbore comprising the steps providing a concentric drill string having an inner pipe, (6) said inner pipe having an inside wall and an outside wall and is within an outer pipe (5) having an inside wall and an outside wall, said outside wall of said inner pipe and said inside wall of said outer pipe defining an annulus (at 32) between the pipes; connecting a buttonhole assembly comprising a directional drilling means to the drill string and downhole collection and transmission means (see col.5, line 51-col 6, lines 5); and delivering drilling medium through one of said annulus or inner pipe for operating the directional drilling means to form said directional or horizontal wellbore and removing exhaust drilling medium by extracting exhaust drilling medium through said other of said annulus or inner pipe.

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Referring to claim 3, Smet discloses the drilling medium is delivered through the annulus (at 32) and the exhaust drilling mediums is extracted through the inner tube (at 30).

Referring to claim 5, Smet discloses the drilling cutting are extracted with the exhaust drilling medium (see col. 4, lines 34-38).

Referring to claim 6, Smet discloses the drilling cutting and hydrocarbons (since the hole is being drilled in a formation) are extracted with the exhaust drilling medium (see col. 4, lines 34-38).

Referring to claims 7 and 32, Smet discloses a reverse circulation directional drilling means (3).

Referring to claim 20, Smet discloses a venturi (31) and the step of accelerating the exhaust drilling medium through the venturi to aid in removal of the exhaust drilling medium.

Referring to claims 23 and 28, Smet discloses measuring while drilling tools (see col. 5, lines 34-col. 6, line 5).

Referring to claim 24, Smet discloses an interchange means (at 27) for directing extracted drilling medium through the inner pipe.

Referring to claim 25, Smet discloses an apparatus for drilling a direction or horizontal wellbore comprising a concentric drill string having an inner pipe, (6) said inner pipe having an inside wall and an outside wall and is within an outer pipe (5) having an inside wall and an outside wall, said outside wall of said inner pipe and said inside wall of said outer pipe defining an annulus (at 32) between the pipes; a bottom hole assembly comprising a directional drilling means to the drill string (see col. 5, lines 51-58); and a drilling medium delivery means through one of said annulus or inner pipe for operating the directional drilling means to form said

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directional or horizontal wellbore and removing exhaust drilling medium by extracting exhaust drilling medium through said other of said annulus or inner pipe.

Referring to claim 27, Smet discloses downhole collection and transmission means (see col.5, line 51-col 6, lines 5).

Referring to claim 41, Smet discloses a venturi (31).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 12,14, 33, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smet ('223) in view of Gray ('370).

Referring to claims 12 and 33, Smet discloses air as the drilling medium (see col. 5, lines 36-39), a reciprocating air hammer (48) and a drill bit (3). Smet does disclose steering means but does not disclose it is a bent sub or housing. Gray teaches using a bent sub or housing as a steering means (see col. 1, lines 28-30). As it would be advantageous to have bent housing to steer the drill, it would be obvious to one of ordinary skill in the art to modify the drill disclosed by Smet to have a bent sub as taught by Gray.

Referring to claim 14 and 36, Smet discloses the drilling medium is air (see col. 5, lines 23)and a drill bit (3) and a steerable downhole air motor (46). Smet does disclose steering means

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but does not disclose it is a bent sub or housing. Gray teaches using a bent sub or housing as a steering means (see col. 1, lines 28-30). As it would be advantageous to have bent housing to steer the drill, it would be obvious to one of ordinary skill in the art to modify the drill disclosed by Smet to have a bent sub as taught by Gray.

4. Claims 16 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smet ('223) in view of Dorel ('784).

Referring to claims 16 and 38, Smet discloses method and apparatus of claims 1,2 and 25. Smet does not disclose the drilling medium is a drilling mud, or a mud motor or a bent sub or housing. Dorel teaches that drilling mud is commonly used to exhaust drilling cutting, a mud motor is commonly used to rotate a drilling bit and a bent sub is used as a steering means (see col. 1, lines 20-35). As one of ordinary skill in the art would be familiar with the use of drilling mud as a drilling medium, a mud motor to rotate a bit and a bent sub as a steering means, it would be obvious to modify Smet to use a drilling mud, drilling motor and bent sub as taught by Dorel.

5. Claims 22 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smet ('223) in view of Sinclair et al. ('515).

Referring to claims 22 and 43, Smet discloses the method and apparatus as claimed. Smet does not disclose the use of a suction compressor. Sinclair teaches using a suction compressor to help remove cuttings from a drill string (see col. 2, lines 59-60). As it would be

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advantageous to have a suction compressor to help the removal of the cuttings be done more easily it would be obvious to modify Smet to have a suction compressor as taught by Sinclair.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna M. Collins whose telephone number is 703-306-5707. The examiner can normally be reached on 6:30-3 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 703-308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gmc


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